

# List of All Chemicals

## P *Minthostachys mollis* (Lamiaceae)

### Common name(s)

Muna; Tipo

### How used

Medicinal

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Plant Part	Low PPM	High PPM	StdDev	*Reference
(E)-BETA-OCIMENE	Shoot	3.0	18.0	-0.45	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
(Z)-BETA-OCIMENE	Shoot	4.0	8.0	-0.41	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
ALPHA-HUMULENE	Shoot	1.0	5.0	-0.38	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.

### Activities (2)

Antitumor Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove (*Eugenia caryophyllata*) As Potential Anticarcinogenic Agents. *Journal of Natural Products* 55(7): 999-1003, 1992.

Perfumery Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants*. Taylor & Frost, London. 791 pp.

ALPHA-PINENE	Shoot	2.0	4.0	-0.15	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
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### Activities (28)

Allelochemical

Allergenic

Antiacne

Antibacterial

Antifeedant

Antiflu

Economic & Medicinal Plant Research, 5: 195.

Antiinflammatory 500 mg/kg

Antipneumonic

Antiseptic

Antispasmodic

Antistaphylococcic

Antiviral

Economic & Medicinal Plant Research, 5: 195.

Cancer-Preventive

Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

Coleoptophile

Michael Castleman 1991. *The Healing Herbs*. Rodale Press, Emmaus, PA 436 pp.

Expectorant

Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

FFlavor FEMA 15-150

Keeler, R.F. and Tu, A.T. eds. 1991. *Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)* Marcel Dekker, Inc. NY. 665 pp.

Herbicide IC50=30 uM

Insecticide 0.82 uM/fly

Insectifuge 50 ppm

Insectiphile

J. Stored. Prod. Res., 22:141, 1986.

Irritant

Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants*. Taylor & Frost, London. 791 pp.

P450-2B1-Inhibitor IC50=0.087 uM

Perfumery Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Pesticide

Lawrence Review of Natural Products, Jun-90.

Sedative

Lawrence Review of Natural Products, Jun-90.

Spasmogenic

Lawrence Review of Natural Products, Jun-90.

Tranquilizer

Lawrence Review of Natural Products, Jun-90.

Transdermal

BETA-CARYOPHYLLENE	Shoot	11.0	32.0	-0.35	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
BETA-PINENE	Shoot	3.0	5.0	-0.12	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.

### Activities (13)

Allergenic	
Antiinflammatory	
Antiseptic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Antispasmodic	
Candidicide	
Flavor FEMA 15-600	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Herbicide	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	
Spasmogenic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Transdermal	

EO	Shoot	700.0	900.0	-0.87	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
ISOMENTHOL	Shoot	3.0	9.0	-0.89	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.

### Activities (1)

Antiacetylcholinesterase IC29=1.2 mM

ISOMENTHONE	Shoot	23.0	44.0	-0.53	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
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### Activities (3)

Antiacetylcholinesterase IC50=1.6 mM

ISOMENTHYL-ACETATE	Shoot	95.0	230.0	1.0	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
LIMONENE	Shoot	4.0	10.0	-0.32	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.

### Activities (60)

AChE-Inhibitor	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Acaricide LC100=8 uM	
Allelochemical	
Allergenic 1/20th carene	
Antiacetylcholinesterase IC22-26=1.2 mM	
Antidiademonic	
Antialzheimeran?	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Antiasthmatic	
Antibacterial	Revista Itiliana Eppos, 12: 5, 1994.
Anticancer	
Antiesophagitic	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory	
Antilithic	
Antilymphomtic	
Antimetastatic (Stomach)	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antiobesity	
Antiseptic	
Antispasmodic ED50=0.197 mg/ml	Fitoterapia No.59-1984.
Antitumor	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Pancreas)	
Antitumor (Prostate)	
Antitumor (Stomach)	

Apoptotic	
Bronchoprotectant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidstat	
Chemopreventive	
Cholesterolytic	
Detoxicant	
Enterococontractant	J. Aromatherapy 4: 22.
Expectorant	
Flavor	
Fungiphilic	J. Agric. Food Chem. 43: 2283.
Fungistat	
GST-Inducer	
Herbicide IC50=45 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Histaminic	
Immunomodulator	
Insecticide 0.37 uM/fly	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Interleukin-6-Inhibitor	
Irritant	
Lipolytic	
Myorelaxant 50 mg/kg	
NO-Genic	
Nematicide IC=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet)	
Ozone-Scavenger	
P450-Inducer	
Peristaltic	
Pesticide	
Photosensitizer	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Transdermal	

MENTHOL	Shoot	120.0	215.0	-0.32	Alkire, B.H., Tucker, A.O., and Maciarello, M.J. 1994. Tipo ( <i>Mimostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
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### Activities (63)

Allergenic	Martindale's 29th
Analgesic	Martindale's 28th
Anesthetic 2,000 ppm	Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. J. Pharm. Pharmacol. 46: 14-18, 1994.
Antiacyetylcholinesterase IC50=2.0 mM	
Antiaggregant IC50=750	
Antiallergic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antiasthmatic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingston, Edinburgh.
Antibacillus MIC=1.25 mg/ml	
Antibacterial MIC=0.625-2.5	
Antibronchitic	Martindale's 28th
Antidandruff	A.L.L. Hunting. Encyclopedia of Shampoo Ingredients. Micelle Press, Cranford NJ. 467 pp.
Antiescherichic MIC=1.25 mg/ml	
Antihalitosis	American Health, 12(4): 17, 1993.
Antihistaminic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antiinflammatory	Martindale's 28th
Antilisteria MIC=0.625 mg/ml	
Antineuritic	
Antiodontalgic	Martindale's 28th
Antipruritic	Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. J. Pharm. Pharmacol. 46: 14-18, 1994.
Antipyretic	
Antirheumatic	Martindale's 28th
Antisalmonella MIC=0.625 mg/ml	
Antiseptic 4 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antisinusitic	Martindale's 28th

ED<sub>50</sub>=0.01 mg/ml

Antistaphylococic  
MIC=0.625 mg/ml

Antistreptococic  
MIC=0.4 mg/ml

Antitartrar

Antivaginitic

Antivulvitic

Bradycardic 65 mg/3 x  
day/woman Martindale's 28th

Bronchomucolytic Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200.

Bronchomucotropic Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Bronchorrheic Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200.

CNS-Depressant

CNS-Stimulant Huang, K. C. 1993. *The Pharmacology of Chinese Herbs*. CRC Press, Boca Raton, FL 388 pp.

Calcium-Antagonist

Candidicide MIC=0.625  
mg/ml

Carminative Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Choleretic

Ciliotoxic Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Congestant Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Convulsant R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. *This and That: The Essential Pharmacology of Herbs and Spices*. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. *Anns. Intern. Med.* 117(2):165-6; Huxtable, R.

Counterirritant

Decongestant? 11  
mg/man Eccles, R., et al. 1989. The effects of oral administration of (-)-menthol on nasal resistance to airflow and nasal sensation of airflow in subjects suffering from nasal congestion associated with the common cold. *J. Pharm. Pharmacol.* 42: 652-654, 1990.

Dermatitogenic

Diaphoretic Huang, K. C. 1993. *The Pharmacology of Chinese Herbs*. CRC Press, Boca Raton, FL 388 pp.

Enterorelaxant

J. Aromatherapy 4: 22.

Expectorant Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Gastrosedative

Merck 11th Edition

Irritant Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Myorelaxant

Martindale's 29th

Nematicide MLC=1  
mg/ml Shoyakugaku Zasshi, 44: 183.

Neurodepressant Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Neuropathogenic 40-100  
mg/day/rat Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Nociceptive Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Perfumery

Merck 11th Edition

Pesticide

Refrigerant Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. *J. Pharm. Pharmacol.* 46: 14-18, 1994.

Rubefacient

Termitecide Jacobson, M., *Glossary of Plant-Derived Insect Deterrents*, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

Transdermal

Vibriocide

MENTHONE Shoot 130.0 265.0 -0.78 Alkire, B.H., Tucker, A.O., and Maciarello, M.J. 1994. Tipó (*Minthostachys mollis* (Lamiaceae)): An Ecuadorian Mint. *Econ. Bot.* 48(1): 60-64.

### Activities (30)

Acaricide

Allelopathic

Analgesic

Antiacyetylcholinesterase  
IC50=1.4 mM

Antiaggregant IC50=750

Antiallergic J. Food Hyg. Soc. Jap. 33(6): 569.

Antibacillary MIC=1.25  
mg/ml

Antibacterial MIC=0.625-  
5 mg/ml

Antiescherichic MIC=5  
mg/ml

Antihistaminic J. Food Hyg. Soc. Jap. 33(6): 569.

Antilisteria MIC=1.25  
mg/ml

119/111

Antiseptic 2.25 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antispasmodic ED50=0.044 mg/ml	Fitoterapia No.59-1984.
Antistaphylococcal MIC=0.625-2.5 mg/ml	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide MIC=2.5 mg/ml	
Cerebrotoxic orl man	J. Aromatherapy 4: 24.
Culicide LC50=156-194 mg/l	
FLavor FEMA 5-50	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	
Insecticide LC50=156-194 mg/l	
Larvicide LC50=156-194 mg/l	
Mutagenic	
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	
Psychoactive	
Sedative	Ortiz de Urbina, A.V., Martin*, M.L., Montero, M.J., Moran, A., and San Roman, L. 1988. Sedating and Antipyretic Activity of the Essential Oil of <i>Calamintha sylvatica</i> subsp. <i>Ascendens</i> . Journal of Ethnopharmacology, 25: 165-171, 1989.
Trichomonicide LD100=600 ug/ml	

MENTHYL-ACETATE	Shoot	0.5	1.0	-0.72	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Minthostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
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#### Activities (2)

Antispasmodic ED50=0.105 mg/ml	Fitoterapia No.59-1984.
Perfumery	Merck 11th Edition

MYRCENE	Shoot	0.4	0.5	-0.34	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Minthostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
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#### Activities (22)

ACE-Inhibitor 100 ug/ml	
Aldose-Reductase-Inhibitor 100 ug/ml	Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpene from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101.
Allergenic	
Analgesic	Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.
Antibacterial	
Anticonvulsant	
Antimutagenic	Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.
Antinitrosaminic	
Antinociceptive 10-20 mg/kg ipr mus	Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.
Antinociceptive 20-40 mg/kg scu' mus	Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.
Antioxidant	Jim Duke's personal files.
Antispasmodic	Jim Duke's personal files.
Chemopreventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
FLavor FEMA 0.5-9	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	
Hypothermic	
Insectifuge	
Irritant	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Myorelaxant 100-200 mg/kg	Zeebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
P450-2B1-Inhibitor IC50=0.14 uM	
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	

NEOMENTHOL	Shoot	180.0	300.0	1.93	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipto ( <i>Minthostachys mollis</i> (Lamiaceae)): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
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#### Activities (2)

Perfumery					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
NEOMENTHYL-ACETATE	Shoot	16.0	28.0		Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
PIPERITONE	Shoot	50.0	100.0	-0.21	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
<b>Activities (7)</b>					
Antiasthmatic					
FLavor FEMA 1-2					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Herbicide IC50=30 mM					Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices &amp; Medicinal Plants: Recent Advances in Botany, Horticulture, &amp; Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Herbicide IC50=75 uM					Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp.
Insectifuge (> DEET)					Bowers, W.S., Ortego, F., You, X., and Evans, P.H. Insect Repellents From The Chinese Prickly Ash <i>Zanthoxylum bungeanum</i> . <i>Journal of Natural Products</i> , 56(6): 935-938, 1993.
Perfumery					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide					
PULEGONE	Shoot	3.0	10.0	-0.27	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
<b>Activities (28)</b>					
AChE-Inhibitor					Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Antiacetylcholinesterase IC50=0.9 mM					
Antiacetylcholinesterase IC50=136 ug/ml					
Antialzheimeran?					Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Antibacterial					Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991.
Anticholinesterase					Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Antihistaminic					Ortiz De Urbina, A.V., Martin, M.L., Montero, M.J., Carron, R., Sevilla, M.A., San Roman, L. 1989. Antihistaminic activity of pulegone on the guinea-pig ileum. <i>J. Pharm. Pharmacol.</i> 42: 295-296, 1990.
Antipyretic					
Avifuge					
Cancer-Preventive					Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide					Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991.
Cerebrotoxic orl man					J. Aromatherapy 4: 24.
Encephalopathic 80 mg/kg orl rat					Lawrence Review of Natural Products, Jan-92.
FLavor FEMA 5-30					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide					Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991.
Glutathionalytic					Lawrence Review of Natural Products, Jan-92.
Hallucinogenic					R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R.
Hepatotoxic					Lewis, E.J. and Friedrich, E.C. 1989. The Essential Oil of Poliomintha incana. <i>Planta Medica</i> 56(2): 224-226, 1990.
Herbicide IC50=1.5 uM					Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp.
Insecticide					Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Insectifuge					
Nephrotoxic					R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R.
Neurotoxic					
Perfumery					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide					
Pulifuge					
Pulmonotoxic					
Sedative					
SABINENE	Shoot	1.0	2.0	-0.29	Alkire, B.H., Tucker, A.O., and Maciarelllo, M.J. 1994. Tipo ( <i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.

<b>Activities (5)</b>					
Antibacterial					
Antihelicobacter					
Antiseptic					
Antiulcer					
Perfumery					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry